

----- ASTRA STEAMER -----



Use and maintenance manual



ATTENTION

ASTRA STEAMER is an appliance designed to sterilize and clean in case of poor water availability and when cost of installation must be reduced (for example saving recycling unit cost).

Before operation, read carefully these instructions and during the operation scrupulously follow them so to avoid malfunctioning of the appliance and damages to people and animals.

The manufacturer is not responsible of eventual damages caused by the machine to people and things in general if the user's operation is not conform to the handbook instructions.

The manufacturer reserves his right not to cover the damages when caused by wrong usage respect to the precautions that follow

----- ASTRA STEAMER -----

CE certified product



Idromatic s.r.l.
via Petrarca n°127
46030 Borg forte (MN) - Italy
p.iva e cod. fiscale: 02096330200
email: info@idromatic.it
website: www.idromatic.it
tel. +39 0376 648756
fax. +39 0376 649140

1. Specifications

TECHNICAL SPECIFICATIONS	
MAX FUEL CONSUMPTION (*)	3,4 L/h
MAX WATER CONSUPTION (*)	36L/h
ELECTRIC INPUT POWER	300W
STEAM PRESSURE (HEATING SWITCH OFF PRESSURE)	9 BAR
STEAM MAX TEMPERATURE	180°C
FUEL TANK CAPACITY	20L
WATER TANK CAPACITY	27L

(*) ONE OPERATOR IN CONTINUOUS SERVICE

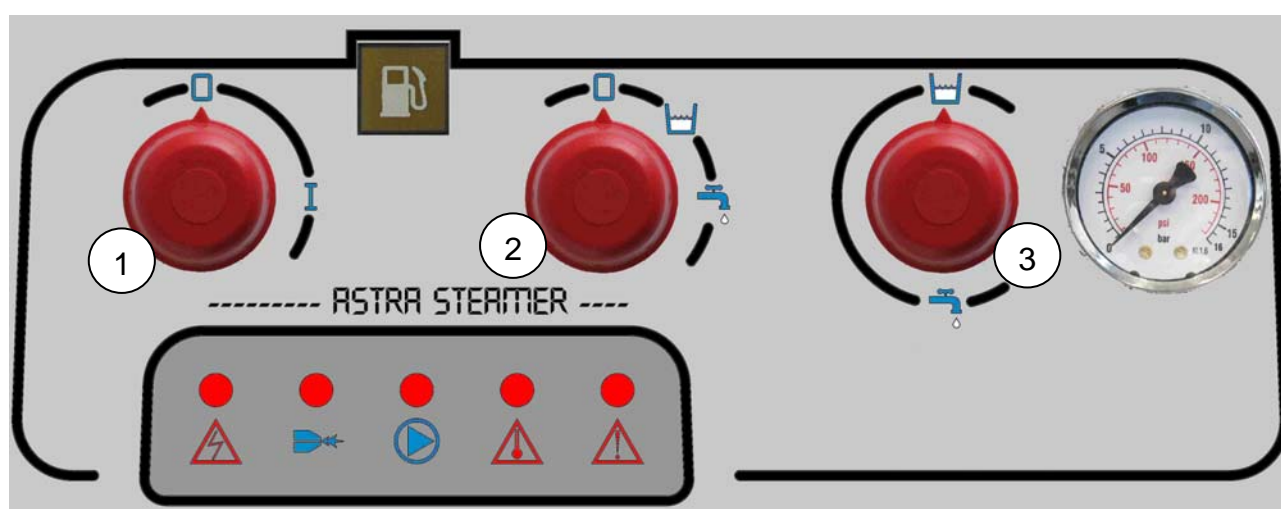


fig.01

Symbol	MEANING
	POWER OFF
	POWER ON
	MOBILE FUNCT.
	STATIONARY FUNCT.
	ELECTRICAL SUPPLY CHAIN CONNECTION
	BURNER ON
	WATER PUMP ON
	OVERHEATING ALARM
	GENERAL ALARM

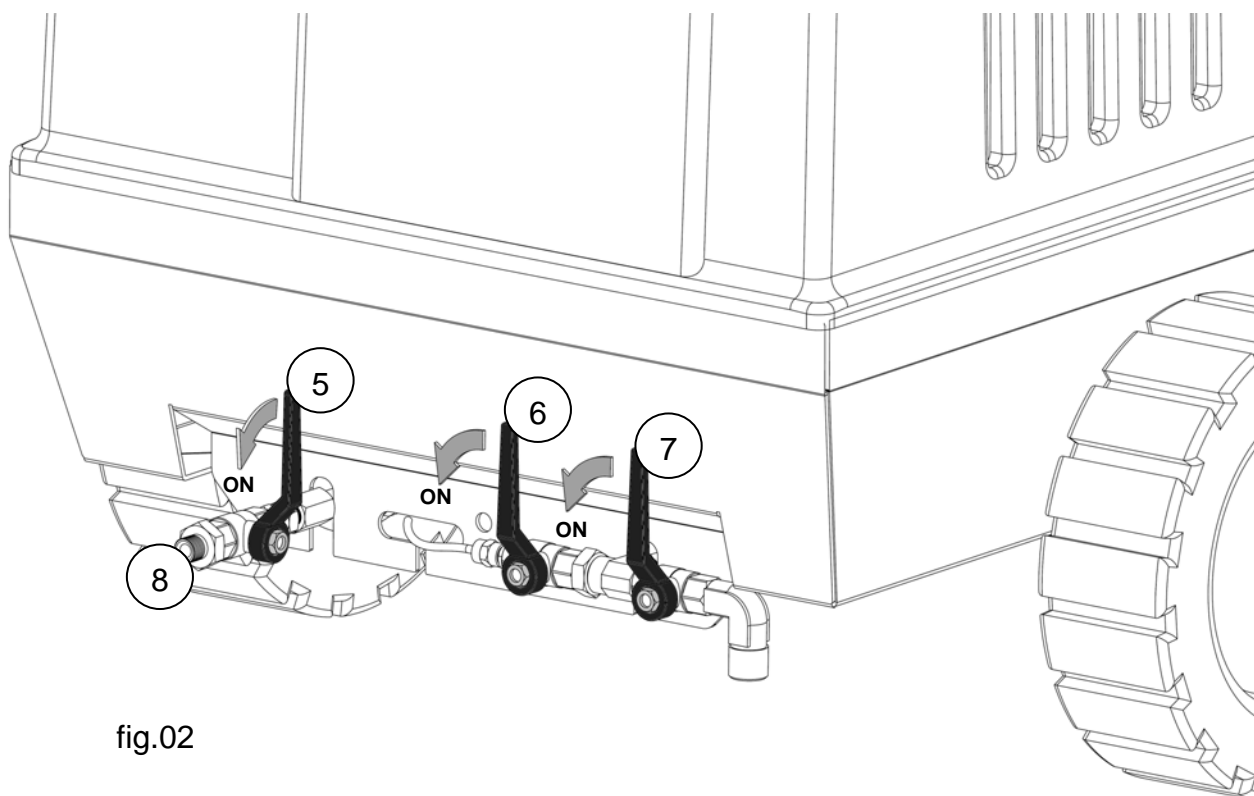


fig.02

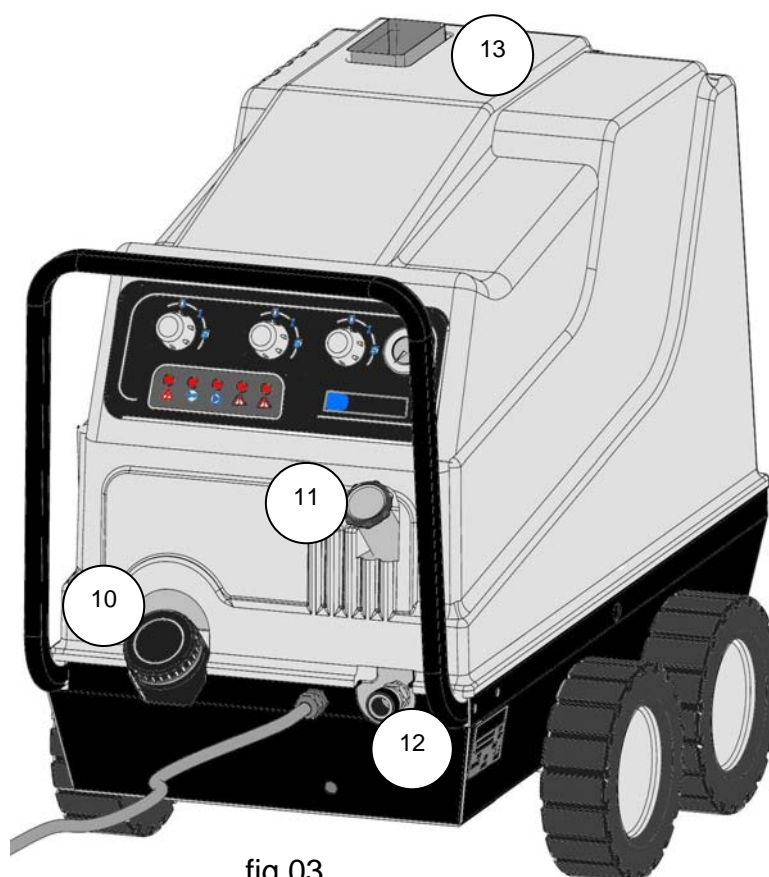
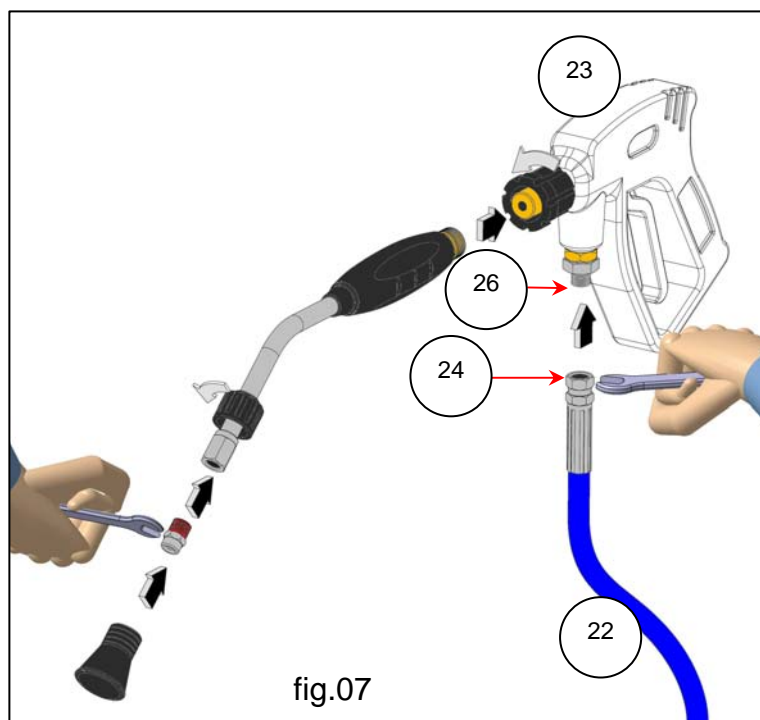
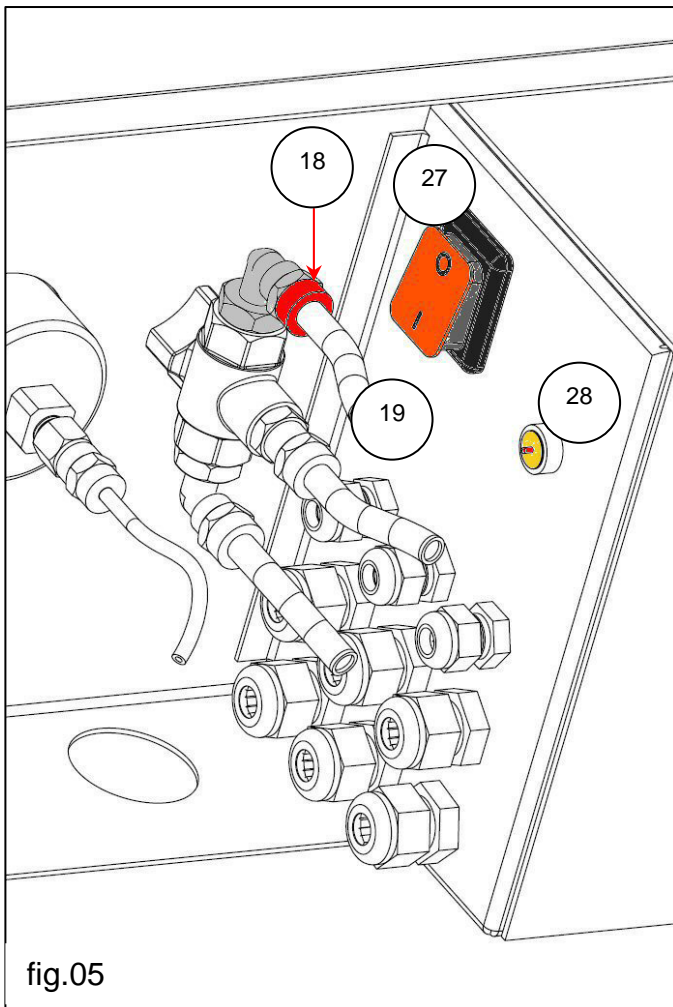
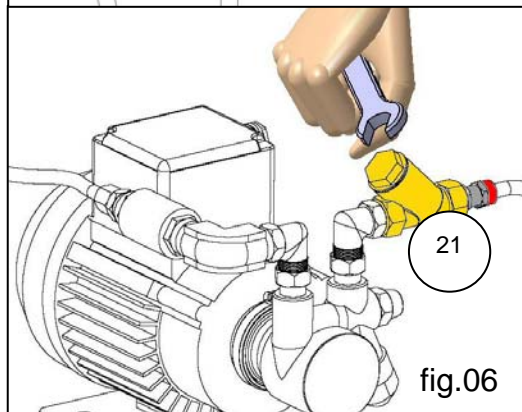
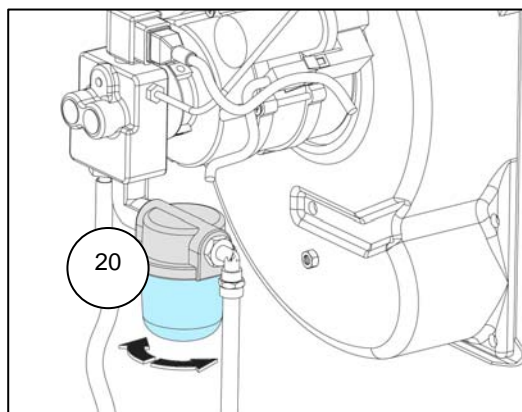
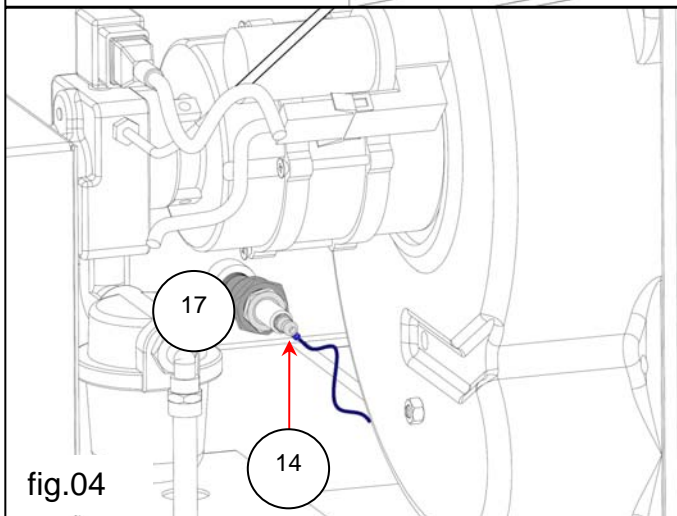
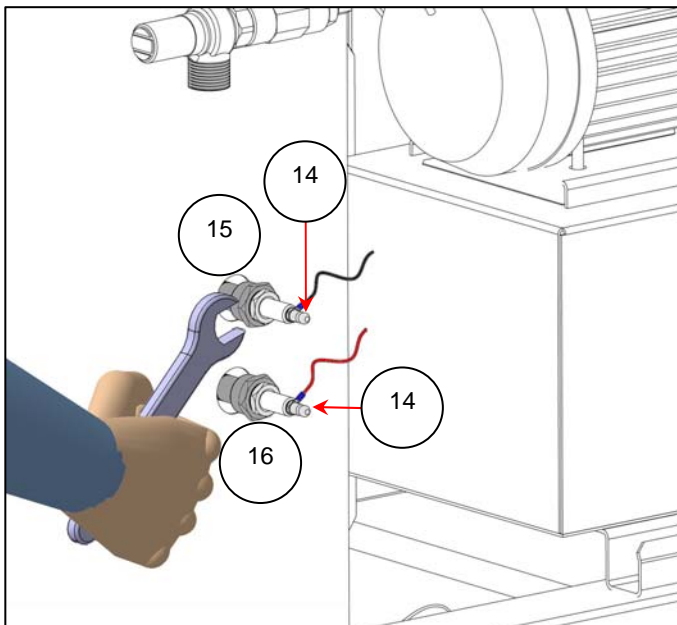





fig.03















2. Before Operation

- a. Release the high pressure fittings n° 24 (fig.07) from steam hose n° 22 (fig.07). Connect the hose to the outlet fittings 8 or 9 (fig.02) tightening them well (do not use glue), then connect the steam hose to the steam gun 23 (fig.07) by tightening well the fittings (do not use glue).
- b. Open valve 4 or 5 corresponding to the outlet where you connected the hose (fig.02) check the other one is closed. If both the 2 outlets are connected (the double hose connection is predisposed) open both of them.
- c. Open the gun trigger (one of the 2) so to let air inside the boiler blow out from the machine
- d. Check there is sufficient amount of fuel in the reservoir ; otherwise refill it by the opposite intake n°10 (fig.03) paying attention that fuel has been filtered and it's of good quality (the use of dirty fuel with water residual compromises the good combustion and damages the fuel)
- e. In case of mobile operation, set the indicator of handle 3 (fig.01) to pos. , (in case of stationary operation please go to point f.) Check there is enough water in the apposite water tank and eventually add some through the intake 11 (fig.03).
- f. if You are using ASTRA STEAMER in stationary mode (connected to the water mains) set the indicator of handle 3 (fig.01) in position , connect the mains hose to the inlet fitting 12 (fig.03), then open the valve; when the water float tank is filled up, the flow will automatically stop.
- g. Connect the wire of ASTRA STEAMER to a plug with proper fuses and obligatory connected to the earth; check the lamp  is lighting, if not, it means machine is not well connected or the lamp is not working. The manufacturer declines every responsibility in case the user doesn't observe these important safety procedures.

3. Start up, operation and store of the appliance



a. **start up:**

- set the switch 1 (fig.01) on .
- set the second switch 2 (fig.01) on fixed operational mode  or in mobile one  depending on your choice at 2.e; 2.f. , then wait some seconds
→ ASTRA STEAMER will automatically replace the minimum water level in the boiler and, when lower probe sensor senses the water, the burner starts with signal a signal .
If initial water level is under the minimum one, the machine produces 2 signals (one luminous and one sound):  + . If, after 60", the water level inside the boiler is still under the minimum the machine switches off for safety ; in this case, to go on with filling it You need to turn the switch 2 (fig.01) off (position ) and then turn it on to the operational mode chosen: stationary =  or mobile= .
If ASTRA STEAMER blocks again , please look at troubleshooting table at point 9 .






- Wait, without opening the trigger, that the lamp  switches off , advising the operating pressure is reached (the burner takes about 2 minutes to get the maximum operational pressure).


b. **Operation:**





Open the trigger to start cleaning with steam.

While operating, ASTRA STEAMER will automatically maintain the right operational conditions by the water pump (water level)  and the burner (pressure range) .

→ If the cleaning is stopped for more than 5', to preserve the steam hose it's suggested to close the outlet steam valve and open the trigger to discharge the steam inside the hose itself

- #### c. **Water and diesel restore:**
- if, during cleaning operation the machine makes a signal  +  You need to refill the fuel tank as explained at 2.d. If the machine is working in mobile way and produces the signal  and not , refill the water tank as described at 2.e. Both the refill operations must be done only after positioning the switch 2 (fig.01) on ; Once finished the refill operations , position the same switch 2 (fig.01) on the operational mode chosen.
- #### d. **Moisture device:**
- In case You use the machine in mobile way and You need to remove the dirt by the flow power rather than temperature only, You can mix dry steam to water by the valve 6 (fig.02) so to operate more like a common pressure cleaner.

- e. **Switch off and appliance storing:** once finished cleaning operation, position switch 2 (fig.01) and switch 1 (fig.01) on ; open the gun to empty the steam left inside the boiler so to set the pressure down to zero, when pressure is 0, close valves 4 and 5 (fig.02) open the pistol to discharge the hose pressure completely.

→ If the machine is stored at temperature below to zero ($<0^{\circ}\text{C}$) remove the plastic cover by the screw 13 (fig.03), empty the water tank removing the hose 19 (fig.05) (apply a small pressure on the part 18 (fig.05)); empty the water float tank and the boiler by the valve 7 (fig.02). While keeping the above valve open turn, the switch 1 (fig.01) onto  and switch 2 (fig.01) onto  or  for 10 seconds to empty the water pump too. When no more water is flowing from the valve 7 (fig.02) close all the valves and reposition the switches 1 (fig.01) and 2 (fig.01) on . Finally, put the machine cover on the machine again.

4. Precautions and storing instructions






- a. **Refill of water and fuel:** use water from the mains or sink that is filtered and do not add detergent or chemical in the water tank.
Do not empty the fuel tank completely so to avoid the dirt of the bottom of the tank to flow into the fuel tank.
Periodically remove deposits discharging completely the fuel tank by the cap underneath it (do not waste the fuel in the environment).
- b. **Prevention of the frost:** avoid to store the ASTRA STEAMER in places where temperature is below to zero.
In case the machine is frosted or some of its parts are, you need to defrost the machine before starting to operate.
In case the ASTRA STEAMER is stored in conditions of temperature below to 0°C follow what's indicated at point 3.e; and control that no parts are frosted when the machine starts to operate.
- c. **Safety and care:**
- Do not operate in closed space;
 - Do not switch on the appliance without the protecting plastic cover on it and do not remove it before all the parts of the machine are cooled down completely, otherwise You may be **burned**.
 - Do not touch the rear fittings connecting the hose and the discharge valve before they are cooled down to the ambient temperature, otherwise You may be **burned**.
 - Be sure, before any kind of operations on hoses, valves, fittings and all parts inside the machine, that the machine is not working and that there is no steam left inside the boiler; to do that carefully follow step 3.e;
 - Keep the children at least 5 meters far from the machine;
 - Do not point the steam spray towards persons animals or materials that can be damaged at high temperature;
 - Handle with care the steam gun: any metal part may cause burning ;

- For any service operation not included in this user manual please contact the service near You or directly Idromatic Srl;
- Do not waste fuel or drain descaler liquid in the environment.
- ASTRA STEAMER During operation period cannot be abandoned by the user or the technician who must control and survey the appliance while functioning.


5. Maintenance

OPERATION	REQUENCY	
	1 MONTH	2 MONTH
CLEANING OF THE WATER TANK AND FUEL TANK	X	
CLEANING OF THE FILTERS	X	
CHECK/CLEANING OF THE WATER SENSORS	X	
CHECK/CLEANING OF THE WATER/FUEL FILTERS	X	
DESCALING		X


6. Descaling

- Disconnect ASTRA STEAMER from electric mains; position the switches 1 and 2 on , check all the parts of the machine are cooled down (pressure gauge must be 0 and at least 10minutes after the steam/water has finished; only after complete discharge of the steam and the cooling down period, open the machine removing the lid
- empty the water tank: take off the hose 19 (fig.05) by little pressure and the fixation bolt 18 (fig.05). empty the boiler by the discharge valve 7 (fig.02) and open the gun to get the air come into the boiler. After these 2 operations above, reconnect the hose 19 (fig.05) and close the valve 7 (fig.02);
- Fill the water tank with 10lit of descaling liquid FABE – SALNET FOSS and 10 lit of warm water.
- Disconnet the steam gun, put the steam hose into the water tank through the filling intake at the right-side under the panel ; open the valve before the steam hose connection;
- Connect ASTRA STEAMER to electric mains. Turn switch 27 (fig.05) ON, turn switch 2 on  and switch 3 on . Rotate main switch1 on  and keep this configuration unitill the descaling liquid starts to flow out of the steam hose, now reposition the switch 1 on .
- Now turn the switch 27 OFF. Attention! Do not close the machine with the cover before this operation. It will cause water overflow during normal operation.
- Wait about 2 hours and then repeat the emptying operation as described at step b). (Be careful not to waste descaling product in the environment);
- Put on the gun again, put the cover lid on and close the steam valve which the steam hose is connected to.

7. Boiler Sensors cleaning












- a. Disconnect ASTRA STEAMER from electric mains; turn switches 1 and 2 off (position ). Only after cooling down of the machine open the cover lid by means of the screw 13 (fig.03);
- b. Empty the boiler by the valve 7 (fig.02) and the steam gun as well . Close the steam gun then
- c. Remove the electric wire form the sensors unscrewing the bolt 14 (fig.04);
- d. Unlock the sensor by a fixed wrench Hex 22 mm;
- e. Clean the sensor metal extremity using descale product , take care to remove all scaling deposits and remove the teflon from the screw of the sensor to fix it again (see point under)
- f. Place sufficient layer of teflon on the sensor screw and fix it again to the boiler. Reconnect the sensor electrically;
- g. Repeat the operations: c. d. e. f. for all the other sensors 15, 16 and 17 (fig.04);
- h. Put the cover lid on again to close the machine.

8. Cleaning of filters 20, 21 (fig.06)

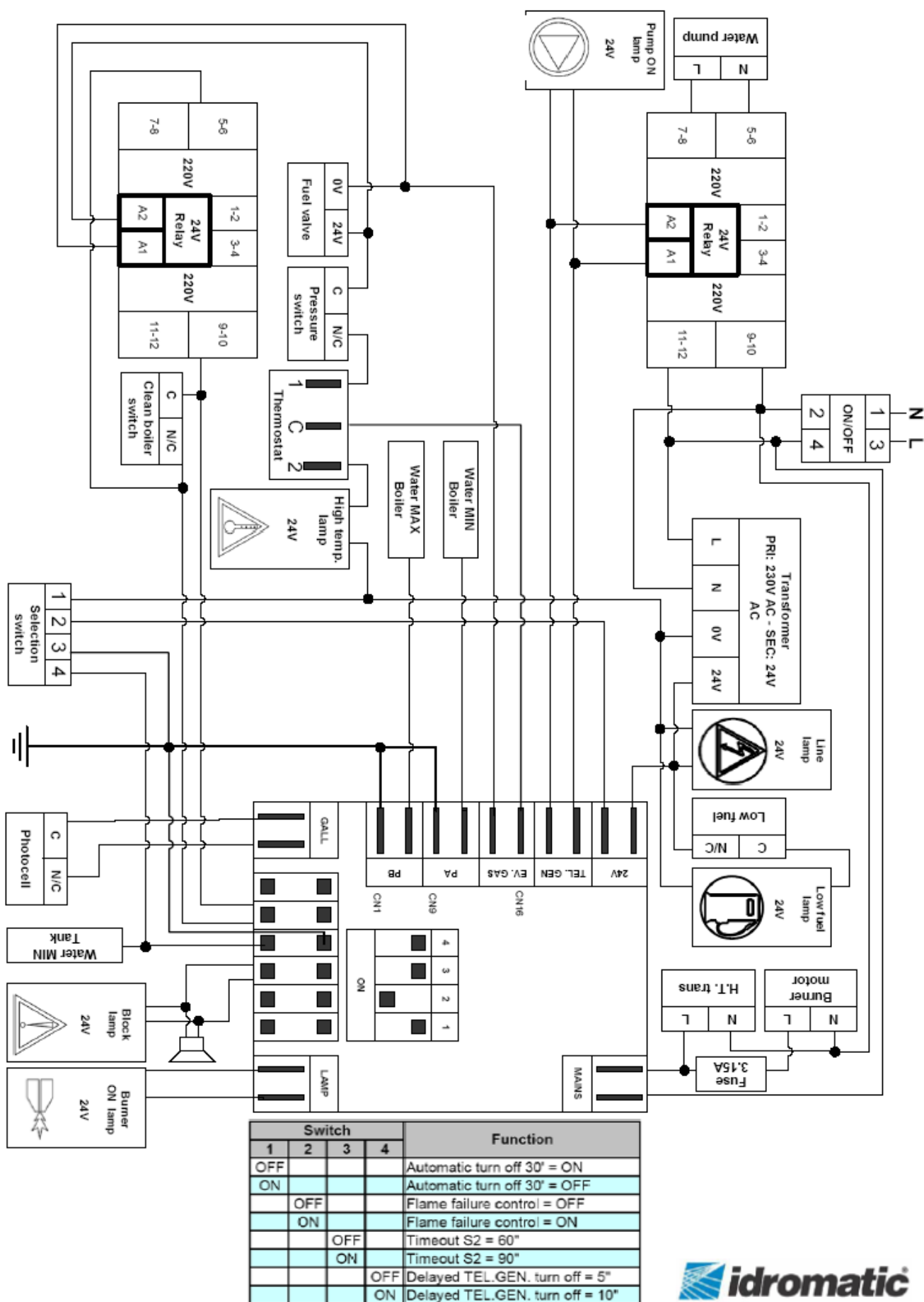
- a. Disconnect ASTRA STEAMER from the electric mains; turn switches 1 and 2 on  after all the parts of the machines are cooled down; then remove the plastic protective lid by unlocking the screw 13 (fig.03);
- b. unlock the filter caps
- c. remove the metal net inside the filer and clean it :

→ to clean water filter 20 (fig.06) use water or compressed air, for the cleaning of the fuel filter 21 (fig.06) use only compressed air;
- d. reinstall the filter.

9. Alarms / problems/ troubleshooting

Symbol	light / acustic signal	Problem	countermeasures
	Continuous	Water filling	/
	1" ON – 1" OFF	Water lack	Go to pint 2.e If problem persists check electric connection of the Sensors . If problem persists go tp 7. If problem persists call the assistance
	1 intermittent + 1" pause	Automatic block after 1 hour inoperating	Go to.to 3.a If problem persists call the assistance
	2 intermittent + 1" pause	Water probe sensor failure	Check sensors electric connection If problem still persists go to 7. If problem still persists call the assistance
	3 intermittent + 1" pause	Water shortage in the boiler	Check sensors electric connection if problem persists go to 7. If problem persists call the assistance
	4 intermittent + 1" pause	Fuel shortage alarm	Go to 2.d if problem persists go to 8. If problem persists call the assistance
	Continuous		
	Continuous	Burner error	Go to 2.d if problem persists go to 8. If problem persists call the assistance
	Intermittent		
	Continuo	Temperature error / pressostat failure	Remove the protection lid as described at 6.a and reactivate the thermostat by botton28 (fig.05). If problem persists call the assistance
	6 Intermittent + 1" paus2	Pump overtime (pump is working for more than 4')	See 2.e Check sensors electric connection If problem still persists go to 7. If problem still persists call the assistance
/	No alarm, pressure overcomes the maximum bearable pressure and safe valve opens	Overpressure, failure of the sensors and/or pressostat	Call the assistance
/	No alarm, pressure overcomes the maximum bearable pressure and safe valve opens	Overpressure, failure of the safety and control system	Check sensors electric connection if problem persists go to 7. If problem persists call the assistance

10. Wiring Diagram (update:16/06/09)





Via Petrarca, 127 - 46030 Borgoforte (MN) ITALY
Tel. +39 0376 648756 - Fax +39 0376 649140
e-mail: info@idromatic.it Web: <http://www.idromatic.it>
REA MN-223709 / C.F. / P.Iva IT 02096330200
Cap. Soc. € 65.000,00 i.v.

Dichiarazione di conformità *Declaration of Conformity*

FABBRICANTE / MANUFACTURER

Nome / Name: **IDROMATIC S.r.l.**

Indirizzo / Address: **Via F. Petrarca 127 46030 BORGOFORTE (MN) - ITALY**

La soprascritta Società dichiara sotto la propria responsabilità che i particolari d'attrezzatura sotto specificati sono stati progettati fabbricati, controllati e provati come richiesto dalle relative disposizioni della Direttiva Attrezzature in Pressione 97/23/CE ed in accordo con il Modulo A1 (controllo di fabbricazione interno e sorveglianza della verifica finale) rilasciato da:

The upper signed Company declares under its sole responsibility that items of equipment specified below have been designed, manufactured, inspected and tested as required by the relevant provisions of the Pressure Equipment Directive 97/23/CE and in accordance with the A1 Module (internal manufacturing inspection and internal manufacturing checks with monitoring of the final assessment) released by:

TÜV ITALIA S.R.L. (0948) Via Giosuè Carducci, 125 edificio 23 20099 Sesto San Giovanni (MI)

N° **TIS-PED-BO-11-02-081524-4675** Data **24.02.2011**

Attrezzatura numero di serie / Equipment serial number: **110218/03**

Descrizione / Description: **SCAMBIATORE DI CALORE ASTRA STEAMER COD. 15.341 – Insieme per pulitrici a vapore serie ASTRA STEAMER**

Pressione min/max di progetto PS [bar] / Designed min/max pressure [bar]: **0/+10;**

Temperatura min/max di progetto TS [°C] / min/max designed temperature [°C]: **0°/+220°;**

Volume [l] / Volume [l]: **14,5;**

Norma tecnica applicata / Technical formula: **VSR Rev.95 Ed. 99;**

La soprascritta Società dichiara inoltre sotto la propria responsabilità che la serie ASTRA STEAMER al quale questa dichiarazione si riferisce è conforme ai requisiti essenziali di sicurezza e di tutela della salute e ai requisiti delle seguenti direttive **CE**: 2006/42/CE – 2006/95/CE.

*The upper signed company also declares under its own responsibility that the ASTRA STEAMER series referred to this declaration, is in conformity with the essential safety and health protection requirements and also complies with the requirements concerning the following **CE** regulations: 2006/42/CE – 2006/95/CE.*

Firma del Legale Rappresentante